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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,586

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Seiji Oka

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EXAMINER

OREILLY, PATRICK F

ART UNIT

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3749

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/573,586	<b>Applicant(s)</b> OKA ET AL.	
	<b>Examiner</b> Patrick F. O'Reilly III	<b>Art Unit</b> 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This action is in response to applicant's Request for Continued Examination (RCE) received on May 13, 2008.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-4, 6-8, 10, 14, 16-17, and 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Application Pub. No. GB 2 260 830 A ("GB '830") in view of Japanese Patent Application Pub. No. JP 2000-046401 A ("JP '401"). These two references, when considered together, teach all of the elements recited in **claims 1-4, 6-8, 10, 14, 16-17, and 19-20** of this application.

4. In particular, claim 1 of this application is obvious when the GB '830 reference is viewed in light of the JP '401 reference. The GB '830 reference discloses the invention substantially as claimed, including: an air conditioning mechanism (air conditioner 100 having a heat exchanger, indoor fan, fan motor 11, etc.) configured and arranged to perform air conditioning of indoor air; an air deflector (outlet 250 that is equipped with an air direction-adjustment device which can adjust the horizontal and vertical direction of the discharged air 25A) configured and arranged relative to the air conditioning mechanism (100) to selectively adjust air flow direction of conditioned air (discharged air 25A) discharged from the air conditioning mechanism (100); a

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control unit (controller 20 in the form of a microcomputer with a user interface 295) operatively coupled to the air conditioning mechanism (100) and said air deflector (250) to control operation of said air conditioning mechanism (100) and said air deflector (250), said control unit (20) being configured to selectively operate said air conditioning mechanism (100) in a plurality of operation modes (the user interface 295 enables the user to specify operational settings for the air deflector 250, such as a natural-wind simulation mode and whether the air will be discharged directly towards the users or around the users, etc.; these user-specified settings are, in turn, used by the controller 20 to determine air deflector blade settings, etc.) including a powerful operation mode whereby a capacity of said air conditioning mechanism (100) is temporarily increased (the controller 20 can be programmed such that the fan motor 11 is increased to provide a larger volume of air for a limited time duration while a human sensor 30 detects the presence of a person), said control unit (20) being configured to selectively operate said air deflector (250) to selectively adjust the air flow direction of said air deflector (250) between a plurality of air flow directions (e.g., airstream directed “towards user”, airstream directed “around user”, etc.), and said control unit (20) being further configured to set the air flow direction to a predetermined air flow direction of the plurality of air flow directions when the powerful operation mode is selected regardless of the air flow direction prior to when the powerful operation mode is selected (based upon the user's programmed preferences, the control unit 20 selects the powerful operation mode, which results in a larger volume of discharged air, when the human sensor 30 detects the presence of a person; at this time, the control unit 20 will stop the “normal mode” swinging of the horizontal-movable grilles 25 and, discharge the air flow directly at the person for a particular time duration). Refer to GB ‘830, Figures 13-16; page 6 of the specification,

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lines 9-13; page 8, lines 17-22; page 13, lines 17-25; page 14, lines 1-25; page 15, lines 1-24; and page 17, lines 15-25.

However, claim 1 of this application further discloses that in the powerful operation mode, the heat exchanging operation of said air conditioning mechanism is temporarily increased. The GB '830 reference does not contain this additional limitation.

The JP '401 reference, although, teaches an split-system air conditioning unit having an indoor unit, an outdoor unit, and a control unit (5) that increases the quantity of supply air from the indoor unit, and further increases the operation frequency of a compressor of the outdoor unit during "powerful operation" mode for the purpose of increasing the overall cooling capacity of the air conditioning system so as to better accommodate user comfort settings. See JP '401, English abstract, also see English translation of Detailed Description for JP '401, paragraph [0012]. Therefore, when the GB '830 reference is viewed in light of the JP '401 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the air conditioning unit of the GB '830 reference by additionally increasing the operation frequency of the compressor during the powerful operation mode, as taught by the JP '401 reference, in order to increase the overall cooling capacity of the air conditioning system so as to better accommodate user comfort settings.

5. In regard to claim 2, the GB '830 reference further discloses that the control unit (20) is configured and arranged such that the predetermined air flow direction of said air deflector (outlet 250 having horizontal and vertical air direction-adjustment devices 25, 26) during the powerful operation mode is set so that air is discharged in a direction (W1, W2) in which people are present (in the first directional mode, the controller 20 modulates the operation and actuation

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of the horizontal and vertical air direction-adjustment devices 25, 26 of the outlet 250 so as to direct the discharged air in directions W1, W2 towards detected human bodies). Refer to GB '830, Figures 14-15; page 8 of the specification, lines 17-22; page 15, lines 7-13; and page 16, lines 12-22. Therefore, GB '830 in view of JP '401 also renders the limitations of this claim obvious.

6. In regard to claim 3, the GB '830 reference further discloses that the control unit (20) is configured and arranged such that the predetermined air flow direction of said air deflector (outlet 250 having horizontal and vertical air direction-adjustment devices 25, 26) during the powerful operation mode is set so that air is discharged in a direction (W12, W12', W14) in which people are not present (in the second directional mode, the controller 20 modulates the operation and actuation of the horizontal and vertical air direction-adjustment devices 25, 26 of the outlet 250 so as to direct the discharged air in directions W12, W12', and W14 around, and away from, detected human bodies). See GB '830, Figures 14 and 16; page 8 of the specification, lines 17-22; page 15, lines 7-13; page 16, lines 23-25; and page 17, lines 1-14. Consequently, GB '830 in view of JP '401 also renders the limitations of claim 3 obvious.

7. In regard to claim 4, the GB '830 reference further discloses that the control unit (20) is configured and arranged such that the predetermined air flow direction of said air deflector (outlet 250 having horizontal and vertical air direction-adjustment devices 25, 26) is set at a fixed orientation during said powerful operation mode (in the first directional mode, where air is directed towards the person, the discharged air is directed in fixed directions W1, W2 – Fig. 14, whereas, in the second directional mode, where air is directed away from the person, the discharged air is directed in fixed directions W12, W12', and W14 – Fig. 16). Refer to GB '830,

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Figures 14-16; page 8 of the specification, lines 17-22; page 15, lines 7-13; page 16, lines 12-25; and page 17, lines 1-14. Thus, GB '830 in view of JP '401 also renders the limitations of claim 4 obvious.

8. In regard to claims 6 and 7, the GB '830 reference further discloses that (claim 6) the control unit (controller 20) further includes a timer configured and arranged to selectively limit a time in which said control unit (20) performs the powerful operation mode (the controller 20 has timing capabilities such that the fan motor 11 can be increased to provide a larger volume of air for a limited time duration while a human sensor 30 detects the presence of a person), and wherein (claim 7) the control unit (controller 20) is further operatively coupled to the timer such that a time at which said air deflector (outlet 250 having horizontal and vertical air direction-adjustment devices 25, 26) is stopped during the powerful operation mode is set in said timer (the controller 20 has timing capabilities such that the operation and actuation of the horizontal and vertical air direction-adjustment devices 25, 26 is modulated for a limited time duration so as to direct the discharged air 25A either towards or away from detected human bodies). Refer to GB '830, Figures 14-16; page 15 of the specification, lines 17-23; page 16 of the specification, lines 12-25; and page 17, lines 1-14. Therefore, GB '830 in view of JP '401 also renders the limitations set forth in these claims obvious.

9. In regard to claims 8, 16, and 19, the GB '830 reference further discloses that the air deflector (outlet 250) comprises a vertically movable flap (the air direction-adjustment device of outlet 250 includes a set of vertical-movable grilles 26 which can control the vertical direction of the discharged air). See GB '830, Figure 14; page 14 of the specification, lines 19-24.

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Consequently, GB '830 in view of JP '401 also renders the limitations of claims 8, 16, and 19 obvious.

10. In regard to claim 10, the GB '830 reference further discloses that said control unit (controller 20) is further configured and arranged to operate said air conditioning mechanism (100) in a cooling operation (the controller 20 and adjustable air outlet 250 are provided as components of an air conditioner 100 and therefore, can be used to selectively adjust the air flow direction during a cooling operation). Refer to GB '830, Figure 13-14; page 13 of the specification, lines 17-25; and page 14, lines 1-16. Thus, GB '830 in view of JP '401 also renders the limitations of claim 10 obvious.

11. In regard to claims 14, and 17, the GB '830 reference further discloses that the control unit (controller 20) is configured and arranged to selectively maintain the air flow direction of said air deflector (outlet 250 having horizontal and vertical air direction-adjustment devices 25, 26) at a fixed orientation during the powerful operation mode (in the first directional mode, where air is directed towards the person, the discharged air is directed in fixed directions W1, W2 – Fig. 14, whereas, in the second directional mode, where air is directed away from the person, the discharged air is directed in fixed directions W12, W12', and W14 – Fig. 16). See GB '830, Figures 14-16; page 16 of the specification, lines 12-25; and page 17, lines 1-14. Therefore, GB '830 in view of JP '401 also renders the limitations of these claims obvious.

12. In regard to claim 20, the GB '830 reference further discloses that the control unit (20) is configured and arranged such that the predetermined air flow direction of said air deflector (outlet 250 having horizontal and vertical air direction-adjustment devices 25, 26) is set to swing said air deflector (250) within a fixed range (swing range A – Fig. 14) of swinging movement



during said powerful operation mode (when the airflow and operation frequency of the compressor are increased). Refer to GB '830, Figure 14; page 15 of the specification, lines 6-15. Consequently, GB '830 in view of JP '401 also renders the limitations of claim 20 obvious.

13. **Claims 5, 15, and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Application Pub. No. GB 2 260 830 A ("GB '830") in view of Japanese Patent Application Pub. No. JP 2000-046401 A ("JP '401"), and further in view of the alternative embodiment depicted in Figure 9 of the GB '830 reference. These two references, and the alternative embodiment depicted in the first reference, when considered together, teach all of the elements recited in **claims 5, 15, and 18** of this application.

14. In particular, claims 5, 15, and 18 of this application are obvious when the embodiment depicted in Figures 13-16 of the GB '830 reference is viewed in light of the JP '401 reference, and further viewed in light of the alternative embodiment depicted in Figure 9 of the GB '830 reference. As described above, the embodiment depicted in Figures 13-16 of the GB '830 reference, as modified by the JP '401 reference, discloses all the elements of the base claims upon which these three claims depend. However, claims 5, 15, and 18 of this application further disclose that the said control unit is configured and arranged such that the predetermined air flow direction of said air deflector is set to change a swing range of said air deflector to a different swing range during the powerful operation mode. The embodiment depicted in Figures 13-16 of the GB '830 reference, as modified by the JP '401 reference, does not contain this additional limitation. Although, the embodiment depicted in Figure 9 of the GB '830 reference teaches a control sequence of operation for an air deflector having horizontal and vertical movable grilles (25, 26) wherein, upon the detection of human presence in two or more different locations by a

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human sensor (3), a control device (2) commands the oscillation of the movable grilles (25, 26) so as to direct airflow ( $W_r$ ) into an area (a) with varying direction based upon predetermined blade settings for the purpose of satisfying the comfort needs of multiple occupants located in discrete locations within a conditioned space. Refer to GB '830, Figure 9; page 11 of the specification, lines 14-25; and page 12, lines 1-6. Therefore, when the embodiment depicted in Figures 13-16 of the GB '830 reference is viewed in light of the JP '401 reference, and further viewed in light of embodiment depicted in Figure 9 of the GB '830 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the air conditioning unit of GB '830 (embodiment of Figs. 13-16) in view of JP '401 by controlling the air deflector to oscillate in a different, predetermined swing range upon the detection of a human body during the powerful operation mode, as taught by the embodiment depicted in Figure 9 of the GB '830 reference, rather than to assume a fixed orientation as disclosed in the embodiment of Figures 13-16, in order to satisfy the comfort needs of multiple occupants located in discrete locations within a conditioned space.

### ***Response to Arguments***

15. Applicant's arguments filed in conjunction with the RCE, dated May 13, 2008, have been fully considered but they are not persuasive for the reasons set forth below.

First, in his traversal of the section 103(a) rejections, the Applicant attempts to distinguish the claimed invention from the GB '830 reference ("Shyu") by asserting that the air flow direction of the air deflector in GB' 830 is set independently of the fan speed. In his Remarks, the Applicant has failed to cite the relevant portions of the GB' 830 disclosure that supports this assertion. Moreover, the GB '830 reference clearly discloses that, when the human

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sensor (30) detects the presence of a person, the controller (20) will *stop* the swing of the horizontal-movable grilles (25), discharge the air directly toward the person, *and* also increase the revolution of the fan motor (11) to provide a larger volume of discharged air. Refer to GB '830, page 15 of the specification, lines 12-22 and page 17, lines 15-25. Consequently, this alleged distinction is without merit in the case at hand because the GB '830 reference irrefutably discloses that the air flow direction of the air deflector (250) is set together with the fan speed.

Moreover, contrary to the Applicant's assertions, the GB '830 reference does disclose a powerful operation mode whereby the fan motor (11) is increased to provide a *larger volume of discharged air* for a limited time duration while a human sensor (30) detects the presence of a person. See GB '830, page 17, lines 15-25. The rejection of claim 1 provided above does not state that GB '830 lacks a powerful operation mode, rather, it only provides that the powerful operation mode in GB '830 does not disclose temporarily increasing the heat exchanging operation of the air conditioning mechanism. Although, as recited above in the rejection of claim 1, the JP '401 secondary reference is relied upon for the teaching of this limitation. Also, as explained above, there is a compelling motivation to simultaneously increase the volume of discharged air *and* the heat exchanging operation of the air conditioning unit (by increasing the operating frequency of its compressor) in order to increase the overall cooling capacity of the air conditioning system so as to better accommodate user comfort settings.

Furthermore, the Applicant attempts to distinguish the claimed invention from the combined teachings of the GB '830 and JP '401 references by alleging that the combination of these two references does not disclose "a control unit configured to set the air flow direction to a predetermined air flow direction of the plurality of air flow directions when the powerful

operation mode is selected regardless of the air flow direction prior to when the powerful operation mode is selected”. This allegation is incorrect. As explained above in the rejection of claim 1, the GB ‘830 reference discloses that, based upon the user’s programmed preferences, the control unit (20) is configured to select the powerful operation mode, which results in a larger volume of discharged air directed either toward, or away from, a person when the human sensor (30) detects the presence of that person. Refer to GB ‘830, page 15 of the specification, lines 12-22 and page 17, lines 15-25. The GB ‘830 reference further discloses that, at this time, the control unit (20) will stop the “normal mode” swinging of the horizontal-movable grilles (25) and, discharge the air flow directly at the person for a particular time duration. See GB ‘830, page 17, lines 15-25. In his Remarks, it appears that the Applicant may be attempting to distinguish over the relied upon prior art references by relying upon unclaimed subject matter. Specifically, it is noted that the present language of the claims do not require the selection of the powerful operation mode *by the user*. Consequently, as presently written, the claims are rendered obvious by the combined teachings of the GB ‘830 and JP ‘401 references, wherein the control unit (20) selects the powerful operation mode, in accordance with user-specified settings, when the human sensor (30) detects the presence of a person.

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick F. O'Reilly III whose telephone number is (571) 272-3424. The examiner can normally be reached on Monday through Friday, 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven B. McAllister can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 3749

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